

## Palisades

### 4Q/2003 Plant Inspection Findings

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#### Initiating Events

**Significance:**  Jun 30, 2003  
Identified By: Self Disclosing  
Item Type: NCV NonCited Violation

##### **Incorrect Potential Transformer Fuses Removed**

A finding was self-revealed when work order instructions were not followed and incorrect potential transformer fuses were removed on safety-related 2400-Volt Bus 1D with the plant in Mode 6 (Refueling). Removal of the incorrect fuses caused a loss of service air to the steam generator nozzle dams and resulted in primary coolant system leakage past the nozzle dams. The primary cause of this finding was related to the cross-cutting area of human performance.

This finding was more than minor because if left uncorrected it would become a more significant safety concern. The finding was of very low safety significance because the event did not result in an inadvertent change in primary coolant system temperature or a significant loss of refueling cavity level. One Non-Cited Violation of Technical Specification 5.4.1 was identified.

Inspection Report# : [2003004\(pdf\)](#)

**Significance:**  Apr 04, 2003  
Identified By: NRC  
Item Type: FIN Finding

##### **White Finding for a Loss of Offsite Power and Loss of Shutdown Cooling Due to Weak Controls for Digging and Excavating**

On March 25, 2003, with the plant shutdown for a planned refueling outage, a loss of offsite power and loss of shutdown cooling event occurred when a signpost being installed in the plant parking lot damaged a cable which contained a combination of energized indication circuitry and de-energized protective relaying circuitry. The metal signpost cut and shorted together several of the conductors within the cable, generating a fault signal to the breakers supplying offsite power to the plant, causing the event.

The lack of established controls in the form of administrative policies and procedures for digging and excavating activities as well as the failure to address a problem of weak controls over excavation and digging activities directly led to this event. The finding was determined to have low to moderate safety significance based upon a Phase 3 Significance Determination Process assessment. However, no violation of regulatory requirements was identified since the act of driving the signpost into the ground was not an activity affecting quality.

On December 31, 2003, a final significance determination letter was issued for this White finding.

Inspection Report# : [2003005\(pdf\)](#)

**Significance:**  Apr 04, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

### **Failure to Follow Operating Procedures**

A finding of very low safety significance was self-revealed during an event when an operator failed to adhere to a procedure for operating the chemical volume control system and repeatedly attempted to close a charging pump breaker after the breaker tripped. In addition, the operator failed to trip primary coolant pumps before primary coolant system pressure dropped below the minimum pressure for primary coolant pump operation. The primary cause of this finding was related to the cross-cutting area of Human Performance.

The finding was more than minor because it could be reasonably viewed as a precursor to a significant event. The repeated operation of an electrical breaker contrary to procedural requirements was a contributing cause to the March 18, 2003, cable spreading room fire. The finding was determined to be of low safety significance because the failure to follow the procedure did not result in a loss of shutdown cooling or loss of reactor inventory. This issue was determined to be a Non-Cited Violation of Technical Specification 5.4.1, which required the implementation of written procedures covering the chemical volume control system and the reactor coolant system.

Inspection Report# : [2003005\(pdf\)](#)



**Significance:** Apr 04, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

### **Failure to Have Adequate Maintenance Procedures**

A finding of very low safety significance was self-revealed during an event when the licensee failed to have adequate maintenance procedures in place to ensure that when an electrical breaker was removed to be refurbished, that the arc chutes were reinstalled before the breaker was placed back in service.

The finding was more than minor because it could be reasonably viewed as a precursor to a significant event since a fire resulted in the P-55A charging pump breaker when the arc chutes were not reinstalled after the breaker had been refurbished. The finding was determined to be of low safety significance because the failure to follow the procedure did not result in a loss of shutdown cooling or loss of reactor inventory. This issue was determined to be a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings."

Inspection Report# : [2003005\(pdf\)](#)

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## **Mitigating Systems**



**Significance:** Dec 31, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

### **Failure of High Pressure Safety Injection Pump P-66B Subcooling Valve CV-3070 to Open**

A finding of very low safety significance was self-revealed when High Pressure Safety Injection Pump P-66B Subcooling Valve CV-3070 failed to stroke open during surveillance testing. Licensee personnel improperly installed a flow control valve in the operating air system which contributed to the valve failing to stroke open. The finding was more than minor because the availability and capability of High Pressure Safety Injection Pump P-66B was adversely affected. The finding was of very low safety significance because there was not an actual loss of safety function for High Pressure Safety Injection Pump P-66B for greater than the Technical Specification allowed outage time.

Corrective actions to address this issue included reinstalling the flow control valve in the proper direction, testing CV-3070 during a mid-surveillance cycle stroke test, and generating a work order to inspect the CV-3070 valve internals at the earliest opportunity. One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified.

Inspection Report# : [2003008\(pdf\)](#)

**Significance:**  Mar 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### **Inadequate Corrective Actions to Address Scaffolding Control Problems**

The inspectors identified a finding for the failure to implement adequate corrective actions to prevent recurrence of issues associated with the construction of seismic scaffolding near safety-related systems.

This finding was more than minor because if left uncorrected it would become a more significant safety concern in that inadequately constructed scaffold could affect the availability of mitigating systems during a seismic event. The finding was of very low safety significance because the finding did not screen as potentially risk significant due to a seismic initiating event and did not involve the total loss of any safety function that contributes to core damage accident sequences initiated by seismic events. The inspectors also determined that this finding represented continued human performance deficiencies in the construction of seismic scaffolding near safety-related systems. A Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified.

Inspection Report# : [2003002\(pdf\)](#)

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## **Barrier Integrity**

**Significance:**  Dec 31, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

### **Failure of Containment Spray Pump P-54C Inboard Motor Bearing**

A finding of very low safety significance was self-revealed when the Containment Spray Pump P-54C inboard motor bearing failed on August 21, 2003. Following a scheduled oil change on the motor bearing, the bearing housing drain plug was also replaced and enough oil was lost during this drain plug replacement to uncover the bearing; however, the vent on the oiler had been plugged when the pump was painted in June 2002 which resulted in an erroneous level indication in the oiler for the bearing housing. Consequently, the operator did not add sufficient oil through the oiler to the bearing housing after the drain plug was replaced. As a result, the inboard motor bearing was inadequately lubricated which caused the bearing to fail when Containment Spray Pump P-54C was started. This finding was more than minor because if left uncorrected, it would become a more significant safety concern. Specifically, the painted vent hole on the motor bearing oiler resulted in erroneous oil level indication and prevented the oiler from adding oil to the bearing housing when the level decreased. Consequently, an inadequately lubricated bearing would not be detected until the bearing failed. The finding was of very low safety significance because it did not represent an actual reduction of the atmospheric pressure control function of the reactor containment.

Corrective actions to address this issue included clearing the vent hole on the bearing oiler, verifying that the oiler vent holes on other safety-related pump motors were not painted over and replacing the inboard motor bearing on Containment Spray Pump P-54C. One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified.

Inspection Report# : [2003008\(pdf\)](#)

**Significance:**  Sep 30, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

**Degraded Motor Bearing in Containment Air Cooler Fan V-4A**

A finding of very low safety significance was self-revealed when the Containment Air Cooler Fan V-4A motor bearing failed and the fan tripped unexpectedly on July 1, 2003, after the fan was declared operable and returned to service following emergent repairs on June 20, 2003. A lack of rigor in the technical evaluation to determine the operability for Fan V-4A on June 20 resulted in the fan being declared operable and returned to service with more significant motor bearing degradation than recognized by licensee personnel. The primary cause of this finding was related to the cross-cutting area of Problem Identification and Resolution.

The finding was more than minor because the finding was associated with the Human Performance attribute of the barrier integrity cornerstone and adversely impacted the cornerstone objective to provide reasonable assurance that the containment barrier protect the public from radionuclide releases caused by accidents or events. The finding was of very low safety significance because there was no adverse impact on the physical integrity of reactor containment and there was no adverse impact on the atmospheric pressure control function of the reactor containment. Corrective actions to address the issue included replacing the motor for Fan V-4A and entering all containment air cooler fans and motors into a predictive maintenance program. One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified.

Inspection Report# : [2003006\(pdf\)](#)

**Significance:**  Mar 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**Inadequate Testing of the Fueling Handling Area Ventilation System**

The inspectors identified a finding for the failure to ensure that testing of the fuel handling area ventilation system was performed in accordance with test procedures which incorporated the appropriate requirements and acceptance limits specified in Technical Specification 5.5.10, "Ventilation Filter Testing Program."

This finding was more than minor because if left uncorrected it would become a more significant safety concern in that the radiological barrier function provided by the fuel handling area ventilation system was degraded and was not being tested adequately. The finding was of very low safety significance because the finding represented a degradation of only the radiological barrier function provided for the spent fuel pool. The inspectors also determined that this finding was a result of human performance deficiencies related to developing and implementing the Technical Specification surveillance. A Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XI, "Test Control," was identified.

Inspection Report# : [2003002\(pdf\)](#)

**Significance:**  Mar 31, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

**Failure to Restore an Inoperable Channel of Hydrogen Monitoring**

The inspectors determined that a self-revealed finding was associated with the failure to restore an inoperable channel of containment hydrogen monitoring within the allowed outage times specified in Technical Specification Action Statements 3.3.7.A and 3.3.7.D.

The finding was more than minor because the barrier integrity cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events was affected. The finding was determined to be of very low safety significance after a Region III Senior Reactor Analyst, in conjunction with the inspectors, performed a SDP Phase 3 assessment. Utilizing NUREG-1675, "Basis Document for Large Early Release Frequency Significance Determination Process," the analyst determined that the significance threshold for large early release frequency of 100 volume percent per day leak rate from containment would not be exceeded. The inspectors also noted that this finding was attributable to a latent human performance deficiency which occurred during the April 2001 refueling outage, but was self-revealed in December 2002. A Non-Cited Violation of Technical Specification Section 3.3.7 was identified.

Inspection Report# : [2003002\(pdf\)](#)

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## Emergency Preparedness

**Significance:**  Feb 07, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Critique Per 10 CFR 50.47 (b)(14) Two Instances in the First Quarter of 2002 as being Unsuccessful Drill and Exercise Performance (DEP) Indicator Data to NRC**

A finding of very low safety significance was identified. The finding was due to an inadequate critique of two DEP indicator opportunities that occurred during licensed operator training sessions in the first quarter of 2002. The licensee's critique process failed to identify that the completed emergency notification forms to simulated State and county officials were not marked to indicate whether the notification was associated with a drill or an actual emergency in accordance with regulatory guidance, NEI 99-02, Regulatory Assessment Performance Indicator Guideline, regarding the accuracy of such notifications.

The critique failure was considered to be greater than minor because it involved the DEP indicator's value exceeding the threshold between the licensee response (Green) band and the regulatory response (White) band. The critique failure also affected the Emergency Response Organization Performance attribute of the Emergency Preparedness Cornerstone. Since the critique failure was in not identifying that the two notification forms were not marked to indicate whether the notification was associated with a drill or an actual emergency, rather than a risk significant topic (i.e., an incorrect emergency classification, an incorrect protective action recommendation, or an untimely notification), the critique failure is a finding of very low safety significance (Green). Because of the very low safety significance of the finding and because the licensee addressed the finding in its corrective action program, this violation of 10 CFR 50.47(b)(14) is being treated as a Non-Cited Violation.

Inspection Report# : [2003003\(pdf\)](#)

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## Occupational Radiation Safety

**Significance:**  Apr 15, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

### **Failure to Obtain a Radiological Briefing Prior to Entry into a High Radiation Area**

A finding of very low safety significance was self-revealed when two workers entered a high radiation area to move a drum and trash bags of radioactive material out of the area without obtaining a briefing regarding the radiological conditions in the area.

The issue was associated with the Human Performance attribute of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation from radioactive material because the workers were not sufficiently cognizant of the radiation fields they could have encountered while inside the high radiation area. The finding was of very low safety significance because the radiological conditions the workers could have encountered were not sufficient to produce a substantial potential for an exposure in excess of regulatory limits. To address this issue, the individuals involved were administratively precluded from entering the Radiologically Controlled Area for the remainder of the outage. Additionally, training to reinforce radiation protection standards and expectations was provided to radiation workers. One Non-Cited Violation for the failure to meet the requirements of Technical Specification 5.7.1.e for the conduct of pre-entry high radiation area briefings was identified.

Inspection Report# : [2003006\(pdf\)](#)



**Significance:** Apr 15, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

**Failure to Meet Radiation Work Permit Requirements Upon Receipt of an Electronic Dosimetry Alarm**

A finding of very low safety significance was self-revealed when a worker failed to stop work and contact radiation protection personnel upon receiving an electronic dosimetry dose rate alarm while rigging a drum of radioactive material to be removed from a posted high radiation area.

The issue was associated with the Human Performance attribute of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation from radioactive material because the failure to appropriately act upon hearing the alarm was a failure of the radiation safety barrier against unplanned and unintended radiation exposures. The finding was of very low safety significance because the dose rates encountered and the worker's short time period within the dose rate field were not sufficient to produce a substantial potential for an exposure in excess of regulatory limits. To address this issue, the individuals involved were administratively precluded from entering the Radiologically Controlled Area for the remainder of the outage. Additionally, training to reinforce radiation protection standards and expectations was provided to radiation workers. One Non-Cited Violation for the failure to meet the requirements of Technical Specification 5.7.1.b regarding the control of activities in a high radiation area through a radiation work permit was identified.

Inspection Report# : [2003006\(pdf\)](#)



**Significance:** Apr 15, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

**Failure to Barricade and Post a High Radiation Area**

A finding of very low safety significance was self-revealed when a drum and trash bags of radioactive material were moved and created an unposted and unbarricaded high radiation area.

The issue was associated with the Human Performance and Program and Process attributes of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation from radioactive material because the uncontrolled high radiation area created the

potential for unplanned and unintended dose to individuals working in the proximity of the drum and trash bags. The finding was of very low safety significance because the dose rates were not sufficient to produce a substantial potential for an exposure in excess of regulatory limits. Upon discovery, the licensee took immediate corrective actions to properly post the high radiation area. Additionally, further surveys were conducted to verify that no other unknown radiological conditions existed. One Non-Cited Violation for the failure to meet the requirements of Technical Specification 5.7.1.a regarding barricading and posting a high radiation area was identified.

Inspection Report# : [2003006\(pdf\)](#)

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## Public Radiation Safety

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## Physical Protection

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## Miscellaneous

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